

REMARKS/ARGUMENTS

In this reply, Claims 1-3, 5, 7, 9-11, 15, 17, 19, 38, 40, 42, 44-45, 47-50 are amended. No claims are canceled. No claims are added. Therefore, Claims 1-50 are pending in the application. The amendments to the claims as indicated herein do not add any new matter to this application.

CLAIM REJECTIONS—35 U.S.C. § 101

Claims 47-48 were rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. The Office Action alleges (p. 2) that "these claims disclose a system or apparatus but do not describe hardware which executes each of the claimed steps, which is required for a system claim to be statutory." Claims 47-48 have been amended to describe the hardware that executes the claimed steps.

CLAIM REJECTIONS—35 U.S.C. § 102

Claims 1-50 were rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Halverson et al. (hereinafter Halverson), "Mixed Mode XML Query Processing", Proceedings of the 29th VLDB Conference, Berlin, Germany, September 12-13th, 2003, pages 225-236). This rejection is respectfully traversed.

As a preliminary matter, Applicants hereby respectfully point out that Halverson is not an application for patent published under section 122(b), nor a patent granted on an application for patent, nor an international application filed under the treaty defined in section 351(a). Thus, Halverson does not qualify as a 35 U.S.C. 102(e) reference.

Claim 1 appears as follows (emphasis added):

1. (Currently amended) A method comprising the computer-implemented steps of:
gathering statistics by a database server about nodes that are stored in a database repository that is managed by the database server;

wherein said nodes form a hierarchy;
wherein each node is either an XML file or a container;
storing said statistics; and
in response to a request to the database server for access to one or more XML resources from said database repository, the database server computing a computational cost associated with each of two or more methods of accessing said one or more XML resources from said database repository, based on said statistics.

Halverson does not suggest or disclose at least the features of Claim 1 shown in bold above. Halverson does not disclose nodes that form a hierarchy, wherein each node is either an XML file or a container. Halverson also does not disclose or suggest a database server that gathers statistics about such nodes, the nodes being stored in a database repository that is managed by the database server. The Office Action alleges (p.4) that some kind of tree structure is disclosed in figure 4 of Halverson. However, "Figure 4 illustrates how the document in figure 2 would be indexed." (Halverson, the sentence before Figure 4 in Section 2.1.3). Also, "An example XML document showing the start and end number assignments for each element appears in Figure 2." (Halverson, Section 2.1.1). Thus, the hierarchy of Figure 4 in Halverson corresponds to an example XML document. However, Claim 1 recites that "...each node is either an XML file or a container". Since the hierarchy of Figure 4 in Halverson corresponds to an example XML document, Halverson does not suggest that each node of the hierarchy of Figure 4 in Halverson is either an XML file or a container. To say that each node of a hierarchy that corresponds to an XML document is either an XML file or a container makes no sense at all.

The rejection of Claim 1 is respectfully traversed. Reconsideration is respectfully requested.

Independent Claims 38, 42, 47, and 48 each recite features similar to the distinguished features of Claim 1. The rejections of each of Claims 38, 42, 47, and 48 are respectfully traversed for the same reasons as discussed herein for Claim 1.

Reconsideration is respectfully requested.

CLAIM 2

Among other features, Claim 2 recites “wherein the step of gathering statistics comprises gathering one or more data from a group consisting of a total number of nodes, in said hierarchy, that are accessible via a path through a specified node, a total number of containers, in said hierarchy, that are accessible via a path through said specified node”. Halverson does not suggest or disclose at least the quoted features of Claim 2. Halverson does not even disclose containers, much less “a total number of containers, in said hierarchy, that are accessible via a path through said specified node”, in the manner recited in Claim 2. The rejection of Claim 2 is respectfully traversed. Reconsideration is respectfully requested.

CLAIM 7

Among other features, Claim 7 recites “wherein XML files of said nodes are XML resources, and wherein the step of storing statistics comprises storing said statistics in a hierarchical index table in which said XML resources are indexed to said database repository.” Halverson does not suggest or disclose at least the quoted features of Claim 7.

The Office Action points to Section 2.1.3 and Figure 4 of Halverson, which appears to disclose some kind of an Index Manager. However, Claim 7 recites that XML

files of said nodes are XML resources, and that the step of storing statistics comprises storing said statistics in a hierarchical index table in which said XML resources are indexed to said database repository. Even if the Office Action is correlating the Index Manager of Halverson to the hierarchical index table of Claim 7, there is **no suggestion of storing statistics** in the Index Manager of Halverson. Also, there is no suggestion of storing statistics in the Index Manager of Halverson in which XML resources (**i.e. XML files**) are indexed to a database repository. In fact, nowhere does Halverson suggest or disclose the quoted features of Claim 7.

The rejection of Claim 7 is respectfully traversed. Reconsideration is respectfully requested.

CLAIM 8

Among other features, Claim 8 recites “wherein the step of computing a computational cost comprises computing a selectivity value for each of one or more predicates, from said request, that contain operators on said database repository.” Halverson does not suggest or disclose at least the quoted features of Claim 8. Halverson does not even suggest or disclose a selectivity value, much less computing a selectivity value as recited in Claim 8. The Office Action points to Section 3.2.2 of Halverson. However, Section 3.2.2 of Halverson discusses a "cost model", which does not suggest computing a selectivity value at all. In fact, nowhere does Halverson suggest or disclose the quoted features of Claim 8.

The rejection of Claim 8 is respectfully traversed. Reconsideration is respectfully requested.

CLAIM 9

Among other features, Claim 9 recites “wherein an operator contained in at least one of said one or more predicates is an operator that determines whether a particular XML resource can be located in said database repository through a particular specified path through a portion of said hierarchy”. Halverson does not suggest or disclose at least the quoted features of Claim 9. The Office Action appears to allege that Figure 3 of Halverson discloses a “Data Manager tree structure”. Even according to the allegations of the Office Action, Halverson does not suggest or disclose “an operator”, much less an operator that determines whether a particular XML resource can be located, in the manner required by Claim 9. Halverson does not disclose such an operator at all.

The rejection of Claim 9 is respectfully traversed. Reconsideration is respectfully requested.

CLAIM 11

Among other features, Claim 11 recites "computing a computational cost of traversing, to locate a particular XML resource specified in said request, an index in which said XML resources are indexed to said database repository". Halverson does not suggest or disclose at least the quoted features of Claim 11. Halverson does not suggest computing a computational cost of traversing an index at all. Section 2.1.3 of Halverson appears to describe some kind of Index Manager, and how indexing information is stored. However, there is no suggestion in Halverson, related to the Index Manager, of computing a computational cost, much less computing a computational cost of traversing an index, in the manner required by Claim 11.

The rejection of Claim 11 is respectfully traversed. Reconsideration is respectfully requested.

REMAINING CLAIMS

The pending claims not discussed so far are defendant claims that depend on an independent claim that is discussed above. Because each of the defendant claims include the features of claims upon which they depend, the defendant claims are patentable for at least those reasons the claims upon which the defendant claims depend are patentable. Removal of the rejections with respect to the defendant claims and allowance of the defendant claims is respectfully requested. In addition, the dependent claims introduce additional features that independently render them patentable. For example, Claim 2 recites “wherein the step of gathering statistics comprises gathering one or more data from a group consisting of a total number of nodes, in said hierarchy, that are accessible via a path through a specified node, a total number of containers, in said hierarchy, that are accessible via a path through said specified node”. Due to the fundamental difference already identified, a separate discussion of those features is not included at this time.

CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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